CLAIMS

We claim:

1. A raster generator comprising:

a line sequencer that is configured to sequence through a list of line descriptors,

each line descriptor of the list of line descriptors including a line-count parameter and a line-type parameter,

the line-count parameter corresponding to a number of raster lines corresponding to the line-type parameter,

the line-type parameter corresponding to a descriptor of a sequence of raster signals that form each raster line corresponding to the line-type parameter, and

a signal generator that is configured to produce the sequence of raster signals based on the descriptor of the sequence.

2. The raster generator of claim 1, further including

a programmable memory that is configured to contain the list of line descriptors.

3. The raster generator of claim 1, wherein

each descriptor of the sequence of raster signals corresponds to a set of pattern identifiers, and

the raster generator further comprises

a pattern sequencer that is further configured to sequence through the set of pattern identifiers to produce a set of pattern sequences corresponding to the descriptor of the sequence.

4. The raster generator of claim 3, further including

a programmable memory that is configured to contain each set of pattern identifiers.

5. The raster generator of claim 3, wherein

each pattern sequence of the set of pattern sequences corresponds to a set of duration-value pairs, and

the signal generator produces the sequence of raster signals by applying particular raster values for particular durations, based on the duration-value pairs.

6. The raster generator of claim 5, further including

a programmable memory that is configured to contain each set of duration-value pairs.

7. An encoder that is configured to receive a digital representation of an image and to produce therefrom a composite video signal that is suitable for display on a display device, wherein the composite video signal includes a video component and a raster component, the encoder comprising:

a datapath that is configured to transform pixel data into the video component of the composite video, and

a raster generator that is configured to provide the raster component,

the raster component comprising a plurality of raster lines,

wherein

the encoder also includes

a raster definition data set that is configured to include

a first link list that includes a plurality of line parameters,

each line parameter including a line-count parameter and a line-type parameter,

the line-count parameter corresponding to a number of raster lines of the plurality of raster lines corresponding to the line-type parameter, and

the line-type parameter including a pointer to one or more descriptors of the raster lines corresponding to the line-type parameter, and

the raster generator is configured to provide the raster component of the composite video signal by processing the descriptors of each of the raster lines, via the first link list.

8. The encoder of claim 7, wherein

the one or more descriptors of the raster lines includes

a second link list that includes pointers to one or more sets of raster sequences.

9. The encoder of claim 8, wherein

each of the one or more raster sequences includes a plurality of sequence descriptors that define discrete intervals for asserting raster values.

10. A method for generating a raster, comprising

sequencing through a list of line entries that each include a line-type and a line-count, and

applying raster signals corresponding to each line-type repeatedly, based on the corresponding line-count.

11. The method of claim 10, further including

programming the list of line entries into a memory that is accessed to effect the method.

12. The method of claim 10, wherein

applying the raster signals corresponding to each line-type further includes

sequencing through a list of raster patterns corresponding to each line-type.

13. The method of claim 12, further including

programming the list of raster patterns into a memory that is accessed to effect the method.

14. The method of claim 12, wherein

applying the raster signals corresponding to each line-type further includes

sequencing through a list of duration-value pairs corresponding to each raster pattern.

15. The method of claim 14, further including

programming the list of duration-value pairs into a memory that is accessed to effect the method.